

CLAIMS

What is claimed is:

- 1 1. A method of minimizing the duration of a risk-assessment scan, comprising:
 - 2 a) selecting a plurality of risk-assessment modules each including vulnerability
 - 3 checks associated with a risk-assessment scan;
 - 4 b) determining a first set of ports required for communicating with network
 - 5 components subject to the risk-assessment modules associated with the risk-
 - 6 assessment scan;
 - 7 c) executing a port scan of the first set of ports;
 - 8 d) determining a second set of ports based on the port scan, the second set of
 - 9 ports being unavailable for communicating with the network components
 - 10 subject to the risk-assessment modules associated with the risk-assessment
 - 11 scan; and
 - 12 e) disabling the risk-assessment modules associated with the second set of ports
 - 13 to minimize the duration of the risk-assessment scan.
- 1 2. The method as recited in claim 1, wherein a plurality of the risk-assessment
- 2 modules each have the same port associated therewith, and redundancy in the
- 3 first set of ports is removed prior to executing the port scan.
- 1 3. The method as recited in claim 1, wherein the risk-assessment modules are
- 2 user-specified.
- 1 4. The method as recited in claim 1, and further comprising storing a third set of
- 2 ports including the first set of ports and excluding the second set of ports.

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- 1 5. The method as recited in claim 4, and further comprising comparing the port
2 associated with each risk-assessment module with the stored third set of
3 ports.
- 1 6. The method as recited in claim 5, and further comprising performing the
2 vulnerability checks of the risk-assessment module if the port associated with
3 the risk-assessment module matches at least one port of the stored third set of
4 ports.
- 1 7. The method as recited in claim 5, wherein the risk-assessment module is
2 disabled if the port associated with the risk-assessment module does not
3 match at least one port of the stored third set of ports.
- 1 8. A computer program product for minimizing the duration of a risk-
2 assessment scan, comprising:
3 a) computer code for selecting a plurality of risk-assessment modules each
4 including vulnerability checks associated with a risk-assessment scan;
5 b) computer code for determining a first set of ports required for
6 communicating with network components subject to the risk-assessment
7 modules associated with the risk-assessment scan;
8 c) computer code for executing a port scan of the first set of ports;
9 d) computer code for determining a second set of ports based on the port scan,
10 the second set of ports being unavailable for communicating with the
11 network components subject to the risk-assessment modules associated with
12 the risk-assessment scan; and
13 e) computer code for disabling the risk-assessment modules associated with the
14 second set of ports to minimize the duration of the risk-assessment scan.
- 1 9. The computer program product as recited in claim 8, wherein a plurality of
2 the risk-assessment modules each have the same port associated therewith,

3 and redundancy in the first set of ports is removed prior to executing the port
4 scan.

1 10. The computer program product as recited in claim 8, wherein the risk-
2 assessment modules are user-specified.

1 11. The computer program product as recited in claim 8, and further comprising
2 computer code for storing a third set of ports including the first set of ports
3 and excluding the second set of ports.

1 12. The computer program product as recited in claim 11, and further comprising
2 computer code for comparing the port associated with each risk-assessment
3 module with the stored third set of ports.

1 13. The computer program product as recited in claim 12, and further comprising
2 computer code for performing the vulnerability checks of the risk-assessment
3 module if the port associated with the risk-assessment module matches at
4 least one port of the stored third set of ports.

1 14. The computer program product as recited in claim 12, wherein the risk-
2 assessment module is disabled if the port associated with the risk-assessment
3 module does not match at least one port of the stored third set of ports.

1 15. A system for minimizing the duration of a risk-assessment scan, comprising:
2 a) logic for selecting a plurality of risk-assessment modules each including
3 vulnerability checks associated with a risk-assessment scan;
4 b) logic for determining a first set of ports required for communicating with
5 network components subject to the risk-assessment modules associated with
6 the risk-assessment scan;
7 c) logic for executing a port scan of the first set of ports;

- 8 d) logic for determining a second set of ports based on the port scan, the second
9 set of ports being unavailable for communicating with the network
10 components subject to the risk-assessment modules associated with the risk-
11 assessment scan; and
12 e) logic for disabling the risk-assessment modules associated with the second
13 set of ports to minimize the duration of the risk-assessment scan.
- 1 16. The system as recited in claim 15, wherein a plurality of the risk-assessment
2 modules each have the same port associated therewith, and redundancy in the
3 first set of ports is removed prior to executing the port scan.
- 1 17. The system as recited in claim 15, wherein the risk-assessment modules are
2 user-specified.
- 1 18. The system as recited in claim 15, and further comprising logic for storing a
2 third set of ports including the first set of ports and excluding the second set
3 of ports.
- 1 19. The system as recited in claim 18, and further comprising logic for
2 comparing the port associated with each risk-assessment module with the
3 stored third set of ports.
- 1 20. The system as recited in claim 19, and further comprising logic for
2 performing the vulnerability checks of the risk-assessment module if the port
3 associated with the risk-assessment module matches at least one port of the
4 stored third set of ports.
- 1 21. The system as recited in claim 19, wherein the risk-assessment module is
2 disabled if the port associated with the risk-assessment module does not
3 match at least one port of the stored third set of ports.

- 1 22. A method of minimizing the duration of a risk-assessment scan, comprising:
- 2 a) selecting a plurality of risk-assessment modules for execution during a risk-
- 3 assessment scan, the risk-assessment modules each including vulnerability
- 4 checks;
- 5 b) determining a set of ports for communicating with network components;
- 6 c) executing a port scan of the set of ports;
- 7 d) modifying the set of ports based on the port scan, the set of ports being
- 8 modified to include only ports available for communicating with the network
- 9 components;
- 10 e) comparing the port associated with each selected risk-assessment module
- 11 with the modified set of ports; and
- 12 f) conditionally disabling the execution of the risk-assessment modules based
- 13 on the comparison to minimize the duration of the risk-assessment scan.
- 1 23. A computer program product for minimizing the duration of a risk-
- 2 assessment scan, comprising:
- 3 a) computer code for selecting a plurality of risk-assessment modules for
- 4 execution during a risk-assessment scan, the risk-assessment modules each
- 5 including vulnerability checks;
- 6 b) computer code for determining a set of ports for communicating with
- 7 network components;
- 8 c) computer code for executing a port scan of the set of ports;
- 9 d) computer code for modifying the set of ports based on the port scan, the set
- 10 of ports being modified to include only ports available for communicating
- 11 with the network components;
- 12 e) computer code for comparing the port associated with each selected risk-
- 13 assessment module with the modified set of ports; and
- 14 f) computer code for conditionally disabling the execution of the risk-
- 15 assessment modules based on the comparison to minimize the duration of the
- 16 risk-assessment scan.